

ENGINEERING TECHNICIAN III

DEFINITION

To perform paraprofessional office and field engineering work including surveying, design of public works facilities, construction inspection, and drafting; and to provide complex and responsible technical support to the professional engineering staff.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey-level classification in the paraprofessional engineering series. Incumbents in this classification perform the more complex technical support duties requiring significant independent judgement. The Engineering Technician III is distinguished from the Engineering Technician I/II by the level of technical complexity in the work performed, and that the Engineering Technician III may provide indirect supervision to lower level engineering technicians.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from the City Engineer or his/her designee.

May exercise technical and/or functional supervision over lower level engineering technicians.

EXAMPLES OF ESSENTIAL FUNCTIONS – *Essential functions may include, but are not limited to, the following:*

Design simple public works projects by researching existing facilities, design manuals, and City standards; applying knowledge of engineering principles and researched information to conceptualize and sketch designs; analyzing costs of alternative designs and preparing construction plans.

Prepare topographical plans and profile maps of property and pertinent features from survey notes and legal descriptions.

Perform technical plan checks of City plans, subdivision plats and improvement drawings, maps, annexations and related proposals to ensure compliance with development conditions, municipal code provisions, City specifications and City policy.

Prepare drawings of various public works improvements, including right-of-way plats; check calculations used in designs and estimates.

Measure distances to be used in the determination of locations of boundaries, easements, improvements, structures and topographic features; maintain written records of measurements.

Ink, trace and letter charts, graphs, maps, plans and other drawings.

Prepare illustrative graphics including charts, illustrations, graphs for reports, and drawings for design manual.

Respond to traffic signal problems when necessary.

Monitor contract specifications and compliance.

Respond to public inquiries regarding engineering activities.

Perform basic design tasks required in the drafting of plans and drawings such as horizontal and vertical layout for infrastructure facilities.

Prepare easement and right-of-way descriptions from calculations and information provided.

Research and compile data from field verifications or office engineering records for inclusion in engineering reports and studies or in response to public inquiry.

Verify location of utilities, easements, property lines, etc., on City engineering plans.

Conduct traffic studies and surveys such as turning movement counts, speed and delay, and radar speed surveys; recommend corrective traffic controls to mitigate traffic problems.

Prepare a variety of written reports and correspondence.

Maintain and update miscellaneous engineering records, files, maps and logs.

Issue and prepare encroachment permits for work being done in City right-of-way.

Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Civil engineering principles, practices and methods applicable to office and field work involving the design, construction and maintenance of public works projects.

Modern materials and techniques used in the construction of public works projects.

Modern equipment and techniques used in engineering.

Principles of engineering mathematics.

Principles and techniques of surveying.

State Subdivision Map Act

Ability to:

Prepare accurate plans, specifications, cost estimates and technical engineering reports.

Perform algebraic and trigonometric engineering calculations to determine distances, areas, volumes, grades, hydraulic flows, etc.

Modify engineering drawings, topographic maps, improvements plans and illustrative graphics using computer-assisted drafting (CAD) software.

Read and understand technical drawings and specifications.

Recognize discrepancies from as-built to contract specifications.

Prepare written reports and correspondence.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

EXPERIENCE AND TRAINING

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Four years of increasingly responsible experience as a journey-level engineering technician similar to the Engineering Technician II in the City of Rocklin.

Training:

Equivalent to completion of the twelfth grade supplemented by college level courses in math, drafting and surveying.

License or Certificate:

Possession of, or ability to obtain, a valid California driver's license.

TYPICAL WORKING CONDITIONS

Assigned work is normally performed in an office environment. Incumbents may be assigned to survey or inspection work, which will require exposure to traffic and weather conditions. Incumbents may drive on surface streets for short periods of time.

TYPICAL PHYSICAL REQUIREMENTS

On an intermittent basis, sit at a desk for long periods of time; intermittently walk, stand, bend, squat, twist and reach while retrieving and/or returning files, plans, and other engineering documents; perform simple grasping and fine manipulation; maintain effective audio-visual discrimination and perception needed for making observations, communicating with others, reading and writing, and operating assigned office and engineering equipment; use a telephone to communicate verbally and use a keyboard to communicate through written means, to review information and enter/retrieve data; see and read characters on computer screen; lift light weights; maintain mental capacity which allows for effective interaction and communication with others.

This class specification lists the major duties and requirements of the job and is not all-inclusive. Incumbents may be expected to perform job-related duties other than those contained in this document.